



National Transportation Safety Board Aviation Accident Final Report

Location:	SAULT STE MARIE, MI	Accident Number:	CHI01LA094
Date & Time:	02/26/2001, 1030 EST	Registration:	N234UM
Aircraft:	Cessna 500	Aircraft Damage:	Substantial
Defining Event:		Injuries:	4 None
Flight Conducted Under:	Part 91: General Aviation - - Air Medical (Unspecified)		

Analysis

The captain said that he flew the VOR approach to runway 32. At 2,500 feet, the captain said that they were out of the clouds and initiated a visual straight-in approach. After aligning the airplane with the runway, the captain said he noticed that there was contamination on the runway, "maybe compacted snow or maybe ice with fresh snow over it." The captain briefed that they would perform a go-around if by midfield they were not decelerating adequately. The captain said that they touched down within the first third of the runway. Close to midfield the airplane fishtailed. Past midfield, the captain called a go-around. The first officer said that the captain added power and he retracted the airbrakes. The first officer exclaimed, "There is not enough runway! I braced myself as the aircraft went into the snow." The first officer said that at about 2 miles out from the runway, the unicom called and said that braking action was nil. A Notice to Airman, in effect at the time of the accident for the airport stated, "icy runway, nil braking."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot exceeding the available runway distance during landing and the pilot's delay in executing a go-around. Factors relating to the accident were, the pilots improper in-flight planning/decision, the pilot disregarding the NOTAMS for the airport, the pilot failing to properly consider the warning given by the Unicom operator regarding the icy runway and nil braking action, the icy runway, and the drop-off/descending embankment.

Findings

Occurrence #1: OVERRUN

Phase of Operation: LANDING - ROLL

Findings

1. (C) DISTANCE - EXCEEDED - PILOT IN COMMAND
 2. (C) GO-AROUND - DELAYED - PILOT IN COMMAND
 3. (F) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
 4. (F) NOTAMS - DISREGARDED - PILOT IN COMMAND
 5. (F) AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - ICY
 6. (F) UNSAFE/HAZARDOUS CONDITION WARNING - NOT FOLLOWED - PILOT IN COMMAND
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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Findings

7. (F) TERRAIN CONDITION - DROP-OFF/DESCENDING EMBANKMENT

Factual Information

On February 26, 2001, at 1030 eastern standard time, a Cessna 500, N234UM, operated by an airline transport pilot, sustained substantial damage when during landing, the airplane departed the end of runway 32 (5,235 feet by 100 feet, ice-covered asphalt) at the Sault Ste Marie Municipal - Sanderson Airport (ANJ), Sault Ste Marie, Michigan, and subsequently encountered terrain. Visual meteorological conditions prevailed at the time of the accident. The medical "Lifeguard" flight was being conducted under the provisions of 14 CFR Part 91. An instrument flight rules flight plan was on file from the Willow Run Airport, Ypsilanti, Michigan, to Sault Ste Marie. The captain, first officer, and two medical technicians on board the airplane reported no injuries. The airplane departed Ypsilanti, Michigan, at 0935.

In his written statement, the captain said that he flew the VOR approach to runway 32. At 2,500 feet, the captain said that they were out of the clouds and initiated a visual straight-in to the runway. "After aligning the airplane with the rwy (runway) it became obvious to me that there was some contamination on the rwy, maybe compacted snow or maybe ice with some fresh snow over it; therefore, I briefed a go-around by midfield if deceleration was inadequate." The captain said that they touched down within the first third of the runway. "...initially we experienced some deceleration but close to midfield the airplane fishtailed at which time I called for a speed reading." He said the first officer "read 80 knots. By then we had passed the midfield and I called a go-around." The captain said he heard the first officer remark that there was not sufficient runway remaining. "... it was some in excess of 1/3 remaining, but I carried on."

In his written statement, the first officer said that about 2 miles out from the runway, "unicom called and said that braking was nill." The first officer said he discussed this with the captain and he said, "If we were not under control at halfway down the runway, we would go around". The second pilot said they touched down at a normal distance down the runway and he extended the airbrakes. "The Captain began braking. I had noted earlier that there was a taxiway midpoint on the runway. As we passed that point I felt we were committed to stay on the ground. At the same time it was becoming obvious [that] we were going off the end of the runway." The second pilot said the captain then asked, "What is our speed? I replied 80 kts (knots)!" The captain then added power and said, "we are going around." The first officer said that as he retracted the airbrakes he exclaimed, "There is not enough runway! I braced myself as the aircraft went into the snow."

In his statement to a Federal Aviation Administration (FAA) inspector, the fixed base operator (FBO) briefer at Sault Ste Marie Airport said that he talked to the pilot on the radio before the pilot attempted to land. The FBO briefer told the pilot that the runway was ice-covered and that there was no braking action.

The FAA inspector examined the airplane at the accident site. The airplane was found at the bottom of small cliff, approximately 300 feet northwest of the departure end of runway 32. The airplane's forward pressure bulkhead was bent aft. The airplane's left wing leading edge was bent inward, and the airplane's nose gear was broken aft. Flight control continuity was confirmed. An examination of the airplane's engines and other systems revealed no anomalies.

A Notice to Airman, published February 15, 2001, and in effect at the time of the accident, stated for ANJ, "icy runway, nil braking."

Pilot Information

Certificate:	Airline Transport; Flight Instructor	Age:	43, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 1 None	Last FAA Medical Exam:	11/30/2000
Occupational Pilot:		Last Flight Review or Equivalent:	01/31/2001
Flight Time:	2770 hours (Total, all aircraft), 1410 hours (Total, this make and model), 990 hours (Pilot In Command, all aircraft), 80 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Co-Pilot Information

Certificate:	Airline Transport	Age:	, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 None	Last FAA Medical Exam:	11/30/2000
Occupational Pilot:		Last Flight Review or Equivalent:	12/31/2000
Flight Time:	3142 hours (Total, all aircraft), 300 hours (Total, this make and model), 2408 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N234UM
Model/Series:	500	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Transport	Serial Number:	105
Landing Gear Type:	Retractable - Tricycle	Seats:	7
Date/Type of Last Inspection:	09/18/2000, AAIP	Certified Max Gross Wt.:	11650 lbs
Time Since Last Inspection:	115 Hours	Engines:	2 Turbo Fan
Airframe Total Time:	8329 Hours at time of accident	Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	JT15D-1A
Registered Owner:	MARLIN AIR, INC.	Rated Power:	2200 lbs
Operator:	MARLIN AIR, INC.	Operating Certificate(s) Held:	On-demand Air Taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ANJ, 716 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	0955 EST	Direction from Accident Site:	320°
Lowest Cloud Condition:	Unknown	Visibility	4 Miles
Lowest Ceiling:	Overcast / 1800 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.25 inches Hg	Temperature/Dew Point:	-7° C / -11° C
Precipitation and Obscuration:			
Departure Point:	Ypsilanti, MI (YIP)	Type of Flight Plan Filed:	IFR
Destination:	SAULT STE MARIE, MI (ANJ)	Type of Clearance:	IFR
Departure Time:	0935 EST	Type of Airspace:	Class E

Airport Information

Airport:	SANDERSON FIELDS (ANJ)	Runway Surface Type:	Asphalt
Airport Elevation:	716 ft	Runway Surface Condition:	Ice
Runway Used:	32	IFR Approach:	VOR/DME
Runway Length/Width:	5235 ft / 100 ft	VFR Approach/Landing:	Full Stop; Straight-in

Wreckage and Impact Information

Crew Injuries:	4 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	David C Bowling	Report Date:	11/01/2001
Additional Participating Persons:	FRANK S SCHAEFER; FEDERAL AVIATION ADMINISTRATION; GRAND RAPIDS, MI		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).